

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 10/750,328

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Dkt: 59082US02
(0102.0057US01)

Filing Date: December 31, 2003
Title: Scratch-Resistant Light Directing Films

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on March 22, 2006, and the references cited therewith. Claims 1-5, 7-14 and 16-22 are now pending in this application.

'102 Rejection of the Claims

Claims 1, 2, 4, 5, 7-11, 13-14, and 16-21 were rejected under 35 USC ' 102(b) as being anticipated by Benson et al U.S. Patent No. 6,080,340. Applicant respectfully traverses this rejection.

Independent claim 1 relates to a light directing film that includes a structured surface having an array of prism elements. The prism elements have "generally parallel tips extending substantially uninterrupted across the structured surface". One example of a structure having prism elements with generally parallel tips extending substantially uninterrupted across the structured surface is FIG. 1 of the present application, reproduced as Illustration A below.

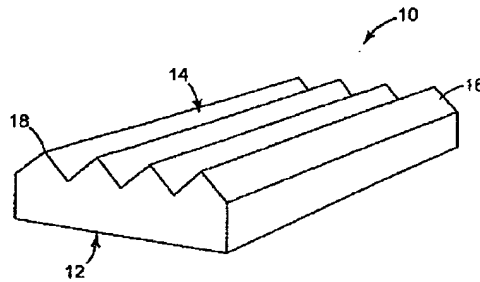


FIG. 1
PRIOR ART

Illustration A. Figure 1 from Present Application

As shown in FIG. 1 of the present invention, a light directing film 10 includes a structured surface 14 and prism elements 16 with peaks 18 that are generally parallel to each other and extend substantially uninterrupted across the structured surface 14. (Present Application, page 5, lines 1-7.) Though FIG. 1 of the present application illustrates a prior art light directing film, it provides a useful illustration of one example of the claim structure of

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prism elements having “generally parallel tips extending substantially uninterrupted across the structured surface”.

The other independent claims 9 and 16-19 are related to a light directing film, light directing article, or optical display and specify “generally parallel blunt tips extending substantially uninterrupted across the structured surface”. FIG. 2 from the present application illustrates the cross-sectional shape of the blunt tips 30 and is reproduced below as Illustration B.

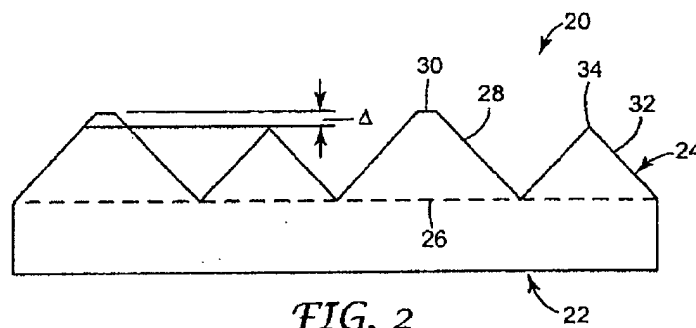


Illustration B. FIG. 2 from present application

U.S. Pat. No. 6,080,340 to Benson (hereinafter “Benson ‘340”) describes a method of machining a substrate to produce a cube corner element optical array. (Benson, Abstract, lines 1-2.) Benson ‘340 defines cube corner elements in the Background of the invention, stating, “Cube corner reflecting elements are trihedral structures which have three approximately mutually perpendicular lateral faces meeting in a single corner.”

FIG. 4 from Benson ‘340, reproduced below as Illustration C, is a plan view of a cube corner element optical array. FIG. 4 illustrates retroreflective cube corner elements 24, 76 and 77. Each has a single corner where three approximately mutually perpendicular lateral faces meet.

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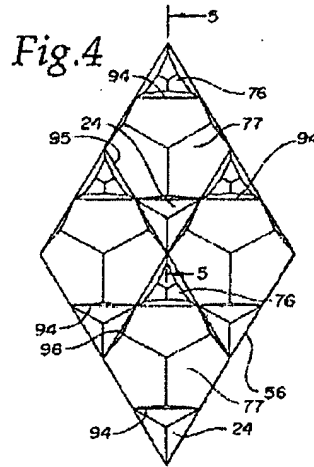


Illustration C. FIG. 4 from Benson '340

As can be seen in FIG. 4, and in other top plan view Figures, Benson '340 does not teach prisms having "generally parallel tips extending substantially uninterrupted across the structured surface" or prisms having "generally parallel blunt tips extending substantially uninterrupted across the structured surface". In fact, Benson '340 teaches and describes optical elements that form single points, not linear parallel tips. While the primary grooves of the structures taught in Benson '340 are parallel to each other, the non-parallel secondary grooves intersect with each other and also intersect the primary grooves in order to form the corner cube elements that each have single peaks. (Benson '340, Col. 3, lines 39-62.)

The Office Action refers to FIG. 15 of Benson '340 as teaching prism elements with parallel tips, and refers to reference number 191 as teaching a blunt tip. FIG. 15 of Benson '340 is reproduced below as Illustration D. The Office Action does not reference a particular element of FIG. 15 or elsewhere in Benson '340 as teaching "generally parallel tips extending substantially uninterrupted across the structured surface" or "generally parallel blunt tips extending substantially uninterrupted across the structured surface". In fact, geometrical structures 218 and 219 form single peaks and do not have parallel tips, as illustrated in the various plan views from Benson '340.

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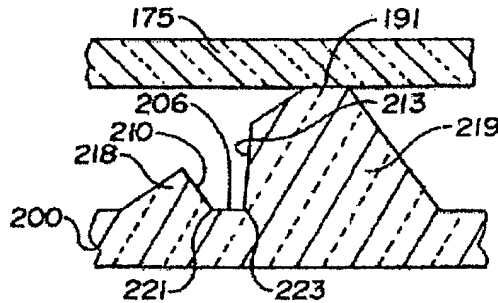


Fig.15

Illustration B. FIG. 15 from Benson '340.

In addition to the lack of teaching of prism elements with parallel tips, Benson '340 also does not teach tips that extend substantially uninterrupted across the structured surface. As mentioned above, the secondary grooves are nonparallel and intersect each other and the primary grooves to form the cube corner elements having single corners. (Benson '340, Col. 3, lines 39-62.) Due to these intersections, there are no prism elements having tips that extend substantially uninterrupted across the structured surface.

Therefore, Benson '340 does not teach the elements of the independent claims 1, 9 and 16-19 and the rejection should be withdrawn. Applicants respectfully request reconsideration and allowance of independent claims 1, 9 and 16-19 and their dependent claims for at least these reasons.

'103 Rejection of the Claims

Claims 3, 12, and 22 were rejected under 35 USC ' 103(a) as being unpatentable over Benson et al. U.S. Patent No. 6,080340 as applied to claim 1, and further in view of Benson et al. U.S. Patent 5,696,627. Applicants respectfully traverse the rejections. Claims 3, 12 and 22 are patentable over the prior art for at least the same reasons as the corresponding independent claims 1, 9 and 19. Accordingly the withdrawal of the rejection of claims 3, 12 and 22 is requested.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-746-4784) to facilitate prosecution of this application.


If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3688.

Respectfully submitted,
Mark E. Gardiner

By his Representatives,

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Date June 22, 2006

By 
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Reg. No. 42,157

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being facsimile transmitted to the USPTO on this 22 day of June, 2006.

Katherine M. DeVries Smith

Name



Signature